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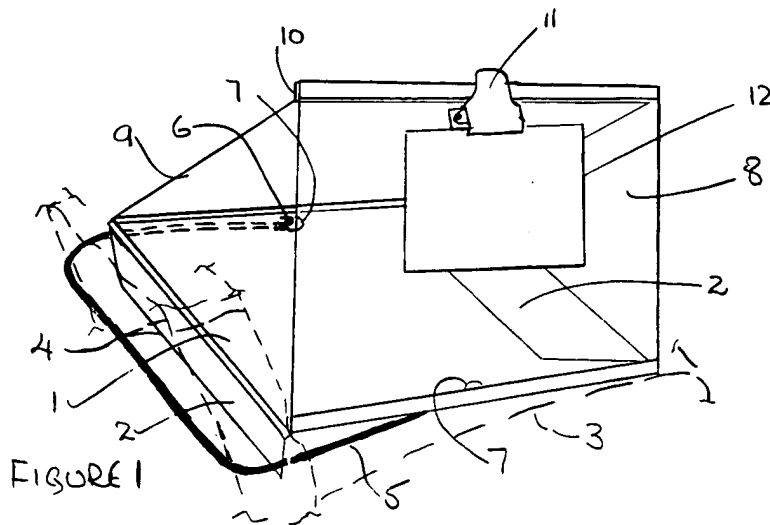
(56) Documents cited
GB 1501397 US 4053133 US 3922973
US 3821936 US 3773154 US 3554139
US 3517978

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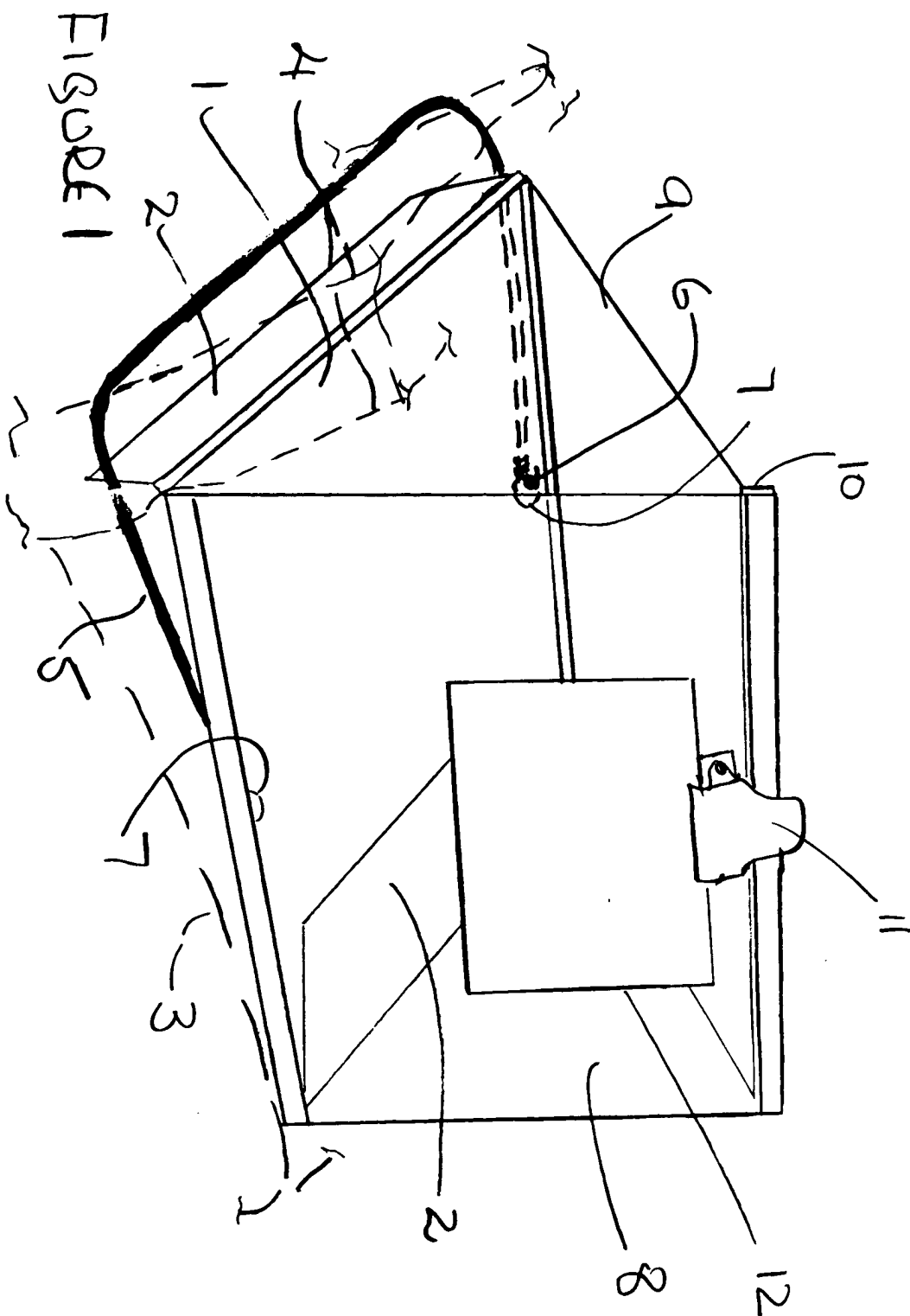
(54) Vehicle desk unit

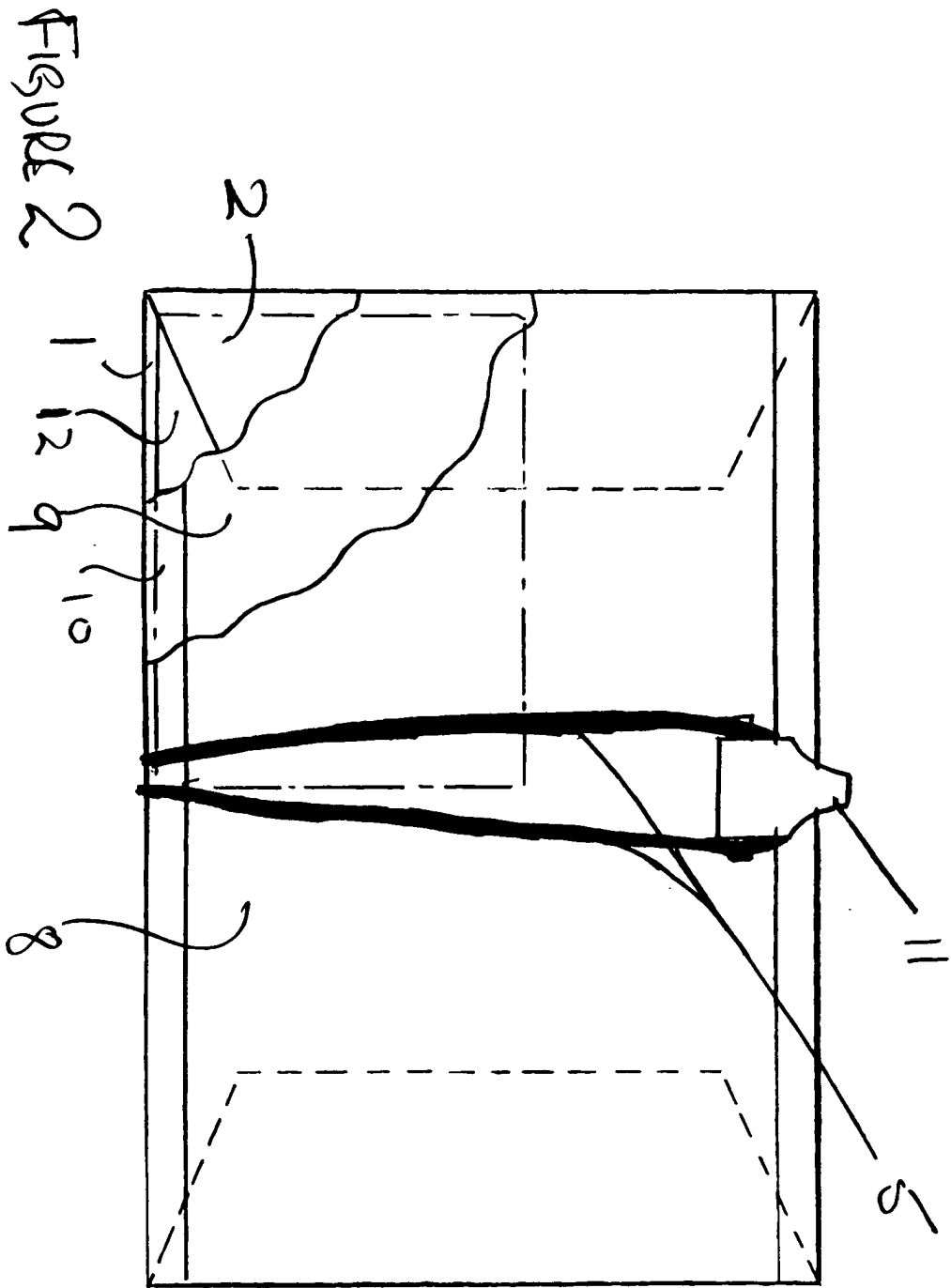
(57) A vehicle desk unit comprises a base 1 with hinged support members 2 at both ends foldable under the base 1. A document presentation board 8 is hinged to one side edge of the base and is foldable over the base. To the other side edge is hinged a strut 9 foldable over the base and releasably connectable to the board 8 along their unhinged edges by meshing plastics strips 10 or press studs. A spring-held document clip 11 is attached to the board 8. Two eyelets 7 are secured to the base under the sides thereof to provide attachment points for the hooked ends 6 of a resilient strap 5.

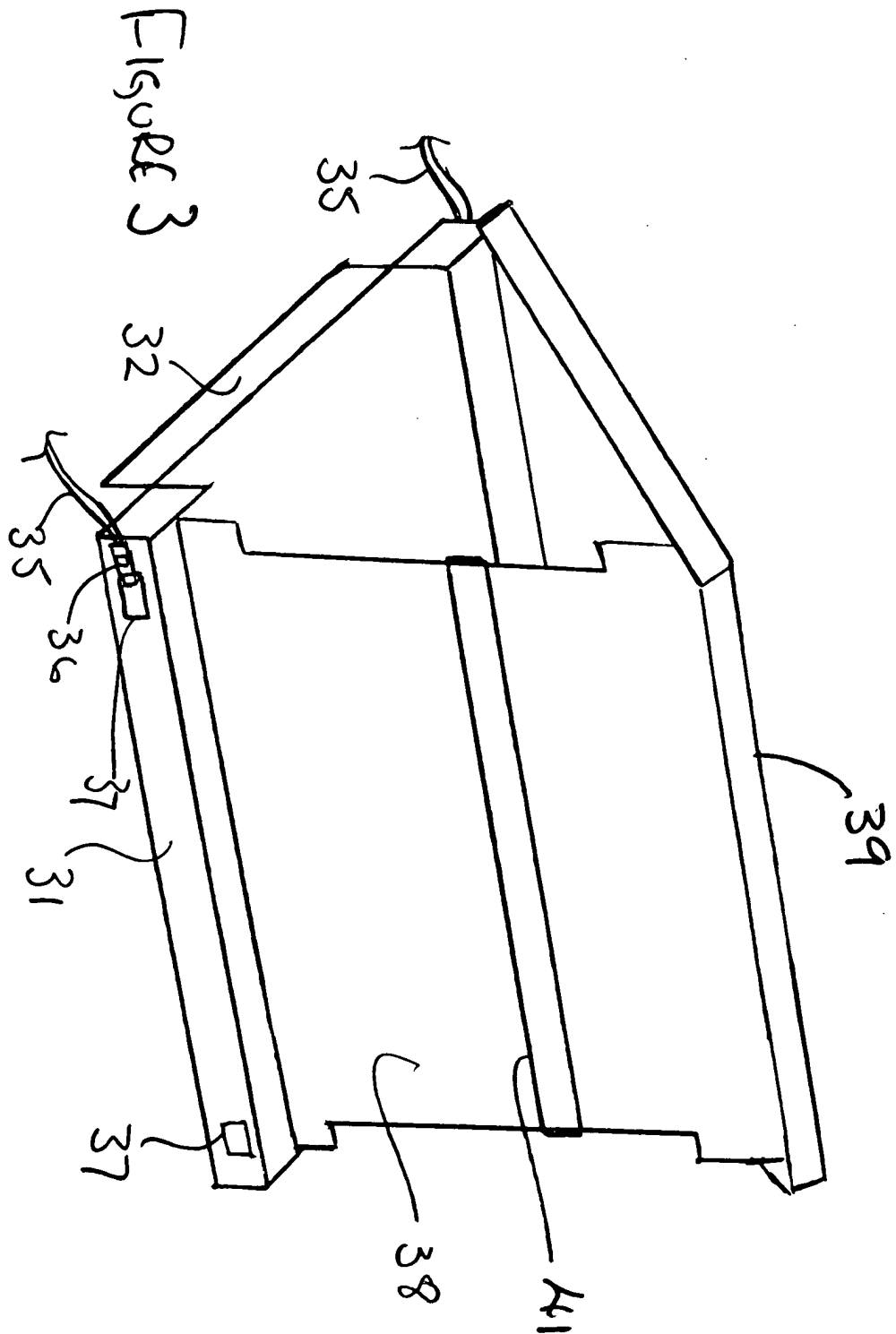
In use, one of the support members 2 is folded down to project from the base 1, and the bottom edge rests upon the rear end of a vehicle seat cushion 3, whose front end is higher and supports the other end of the base 1. One hooked end 6 of the strap 5 is disengaged from its eyelet 7 and passed around the back 4 of the seat and re-engaged with its eyelet 7, so that the strap is stretched and holds the end of the base against the seat back 4.



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SPECIFICATION

Vehicle desk unit

- 5 The present invention relates to a vehicle desk unit, that is to say a device whereby papers, maps and the like may be displayed and/or supported primarily in a vehicle although it is anticipated that the desk unit may be used elsewhere.
- 10 We have determined that the most suitable place for displaying and supporting documents in a vehicle is the front passenger seat, bearing in mind that we anticipate that users of the desk unit are most likely to be businessmen, salesmen, delivery drivers and the
- 15 like; such people generally travel alone in their vehicles — cars, vans or lorries. Further the passenger's seat is suitable because if the documents are supported nearer the driver's forward line of sight, they are likely to be more of a distraction during
- 20 driving.
- In referring herein to vehicle seats, we will use the following terminology:—
- "back" means the upholstered part of the seat against which a user leans his back,
- 25 "cushion" is restricted to mean the upholstered part of the seat upon which the user sits and
- "seat" means the entire seat including both the "back" and the "cushion".
- A problem with supporting documents on a vehicle
- 30 seat is that invariably the seat's cushion slopes downwardly towards the base of the seat's back, with the result that papers laid on the cushion will tend to slide towards the back. Additionally, of course, braking and cornering and draughts can cause the
- 35 papers to be thrown around the vehicle.
- So far as we are aware no specifically designed vehicle desk unit exists.
- It is the object of our invention to provide a vehicle desk unit.
- 40 A vehicle desk unit of our invention comprises a document holding base including means for holding the documents thereto and means for supporting and retaining the base at least substantially horizontal on a vehicle seat.
- 45 The supporting and retaining functions may be provided in combination by a strap passing around behind the seat's back and drawing the rear end of the base into the upholstery of the back with sufficient force to not only retain the unit on the seat but also to
- 50 support the rear of the base at a height such that the base remains horizontal when its front end is resting on the seat's cushion.
- It should be noted that whereas it is aesthetically preferable for the base to be actually horizontal, the
- 55 function of the desk unit will not be impaired if the base is supported several degrees off horizontal.
- As an alternative and/or additionally to be supporting and retaining functions being combined, a separate support member may be provided, conveniently
- 60 in the form of a leg member hinged to the base. With this arrangement, the retaining function may still be performed by a strap passing behind the seat's back.

Alternatively the retaining function may be performed by a single strap passing from the base between the

65 seat's back and cushion and being secured either to the seat's frame or to the floor. It is envisaged that the supporting leg member may be configured to perform the retaining function with the aid of the vehicle's seat belt.

- 70 In simple embodiments of the invention, for holding the documents, the document holding base may be provided merely with a lid defining a gap between itself and the base or a simple closure flap. Such lid or such closure flap may be transparent for viewing of
- 75 the documents when the lid or flap is closed onto the base. Alternatively or additionally a clip or other document holding means may be provided on the base.

In more elaborate embodiments, a document presentation surface may be provided hinged to the base and supportable at an angle thereto for presenting the documents approximately transversely to the user's line of sight, when he or she is in the vehicle's driving seat and the desk unit is supported and retained on the

80 passenger's seat. Conveniently, the presentation surface will have a clip or other means of securing papers thereto. Further, it may be a transparent board so that papers can still be viewed when it is folded down onto the base, in the manner of a closure flap. The

90 presentation surface is preferably hinged to the base at one side edge of the base, with a support strut hinged to the other side edge and connectable to the presentation surface for supporting it. Preferably it is fastenably connectable, for example with press studs

95 or Velcro (Registered Trade Mark) strip. The strut may be a board similar to the presentation surface arranged to be between the presentation surface and the base when closed flat or a lid giving the desk unit depth when closed with the strut/lid enclosing the presentation surface between the lid and the base.

100 To help understanding of the invention, two specific embodiments thereof will now be described with reference to the accompanying drawings in which:—

Figure 1 is a perspective view of one vehicle desk unit according to the invention;

Figure 2 is a plan view, partly cut away, the desk unit of Figure 1 in a closed position; and

Figure 3 is a perspective view of another desk unit according to the invention.

- 110 Referring first to Figure 1, the desk unit has a document holding base 1. At both ends of the base 1, support members 2 are hinged thereto. The cushion 3 and back 4 of a vehicle seat are shown in outline in Figure 1. The front end of the base 1 rests and is
- 115 supported on the front end of the cushion 3. The rear end of the base 1 is spaced from and supported on the rear end of the cushion by one of the support members 2 which is folded down to engage the cushion. At the same time the rear end of the base
- 120 engages the back 4 and is supported by friction with the back. A resilient strap 5, conveniently of rubber, passes around behind the seat back 4 and is attached to the base by being hooked by hooked ends 6 to attachment points in the form of eyelets 7 in the base

1. Tension in the strap both draws the desk unit back so that its rear end engages the seat with the mentioned friction and retains the desk unit in position on the seat.

5 It will be noted that the desk unit is handed by the provision of a presentation surface 8 hinged to one side edge of the base. Nevertheless since similar support members 2 are provided at both ends of the base and the eyelets are provided centrally, longitudinally, in the base the desk unit can be used in for instance left- or right-hand drive cars and in both instances be positioned on the passenger's front seat with the presentation surface 8 on the driver's side of the desk unit.

15 The presentation surface is supported at a suitable angle for viewing by the driver by means of a strut member 9 hinged to the opposite side edge of the base. The strut member is in the form of a plane surface and has a strip 10 hinged to its free edge, on which is provided Velcro tape or press studs. Complementary Velcro tape or press studs are provided at the free edge of the presentation surface for fastening of the strip 10 to the presentation surface, whereby the latter is supported.

25 The presentation surface has a clip 11 for clipping a document 12 to the presentation surface to hold the document with respect to the base.

The base 1, support members 2, strut surface 9 and strip 10 conveniently of cardboard, are covered with sheet plastics material welded around the edges of the cardboard or of other plastics laminate construction. The members are interconnected by the sheet material with hinges therebetween being formed by the welded joints. As shown in Figure 1, the presentation surface 8 is of clear plastics board with the sheet material and Velcro strip suitably adhered thereto.

Figure 2 shows the desk unit folded closed for removal from the vehicle. The two support members 2 can both be hinged down to overlie papers 12, shown in chain-dotted outline, on the base thereby preventing the papers from slipping out from the ends of the desk unit by means of the sheet material extending from the base to the support members. Similarly the papers are prevented from slipping out at the sides of the base by the sheet material connecting the base to the strut surface 9 and the presentation surface 8. The strut surface 9 overlies the support members 2 and the presentation surface overlies the strut surface. The desk unit is conveniently maintained in the closed position by wrapping the strip 5 around it and engaging its hooks 6 in the eyelets 7.

Figure 3 shows a more elaborate vehicle desk unit, which is in the general configuration of a brief case (the carrying handle and locks of which are not shown). The base 31 has upstanding sides, portions of which at the appropriate end can be hinged down as a support member. A strap 35 is provided for passing around the seat back. The ends of the strap are provided with hooks 36 for engaging in sockets 37 provided in the base 31. A presentation surface 38 is supportable at a suitable angled position between the base 31 and the desk unit's lid 39. A slide 41 on the presentation surface 38 is provided for holding papers.

65 The invention is not intended to be restricted to the

details of the above described embodiments.

CLAIMS

1. A vehicle desk unit comprising a document holding base including means for holding documents, and means for supporting and retaining the base substantially horizontally upon a vehicle seat.

2. A unit according to claim 1, in which the supporting and retaining means includes a resilient strap for attachment to the base and engageable around the back of the vehicle seat to retain and support the base.

3. A unit according to claim 1 or 2, in which the supporting and retaining means includes a separate support member hinged to the base.

4. A unit according to claim 1, 2 or 3, in which the retaining function is provided by a passenger safety belt of the vehicle.

5. A unit according to any preceding claim, in which the document holding means is in the form of a lid or closure flap defining a gap between itself and the base.

6. A unit according to claim 5, in which the lid or flap is transparent.

7. A unit according to any preceding claim, in which the document holding means includes a spring-held clip on the base.

8. A unit according to any preceding claim, in which a document presentation surface is hinged to the base and is supportable at an angle thereto.

9. A unit according to claim 8 as appendant to claim 7, in which the document securing clip is attached to the presentation surface.

10. A unit according to claim 8 or 9, in which the presentation surface is in the form of a transparent board.

11. A unit according to claim 8, 9 or 10, in which the presentation surface is hinged to the base at one side edge thereof, with a support strut hinged to the base at the other side edge thereof and connectable to the presentation surface for supporting it.

12. A unit according to claim 11, in which the strut is disengageably connected to the presentation surface, as by press studs or meshing plastics strips.

13. A unit according to claim 11 or 12, in which the strut is a board similar to the presentation surface, arranged to lie between the base and the presentation surface when closed.

14. A unit according to claim 11 or 12, in which the strut is a board similar to the presentation surface, arranged to form a lid between which and the base the presentation surface lies when closed.

15. A vehicle desk unit substantially as hereinbefore described with reference to Figures 1 and 2 of the accompanying drawings.

16. A vehicle desk unit substantially as hereinbefore described with reference to Figure 3 of the accompanying drawings.